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EXAMINER	
CAJILIG, CHRISTINE T	
ART UNIT	PAPER NUMBER
3633	

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02/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,990	HOLLOWAY, WYNN PETER	
	Examiner	Art Unit	
	CHRISTINE T. CAJILIG	3633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,5-7 and 11-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,5-7 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 15 is objected to because of the following informalities: The last line of the claim recites a "width to thickness ratio of between 1:16.33 to 1:10.90;" however, it appears that the ratio is a “thickness to width” ratio. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 5-7, 11 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambuth (U.S. Patent No. 4,413,459) in view of Grigsby et al. (U.S. Patent No. 5,681,641), Landsem (U.S. Patent No. 2,118,048) and Edwards et al. (U.S. Patent No. 1,768,833).

Regarding claim 15, Lambuth in Figure 4 discloses a wooden composite I-beam (80) comprising upper and lower flanges (86,88) interconnected by a web (b) comprising a pair of spaced apart planar side walls (82,84) having a cavity (a) therebetween, the side walls being formed from plywood, the plywood having mutually perpendicular adjacent plies (Col 5, Ln 8-14). Lambuth does not disclose the cavity within the web being filled with a core of corrugated paper or corrugated cardboard, the core being adhered to the surrounding walls, that the upper and lower flanges are made

of plywood having mutually perpendicular adjacent plies, or that the flanges have a width to thickness ratio of between 1:16.33 to 1:10.90. Grigsby et al. in Figure 1 teaches a structural member having a central cavity comprising a core (a) of corrugated paper or corrugated cardboard (12), the core being adhered to the surrounding walls (16,18), (Col 6, Ln 22-24) to provide further stiffness for the member using light-weight material (Col 6, Ln 37-50). Landsem discloses an I-beam wherein upper and lower flanges (11 and 12) are composed of plywood wherein the grain in adjacent layers are perpendicular to each other (Pg 1, first Col, Ln 40-46) to provide a material that would readily meet design stresses (Pg 1, first Col, Ln 10-14). Edwards et al. discloses a structural member wherein flanges can be made out of a variety of width to thickness ratios (Figure 1, first set of values in the "12 Inch Group," has a width to thickness ratio of 1:15.8 using the dimensions the Figure 4 beam). The ratio of 1:15.8 falling between the range of 1:16.33 to 1:10.90. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the wooden composite beam of Lambuth to include a core of corrugated paper or corrugated cardboard, the core being adhered to the surrounding walls as taught by Grigsby, to have upper and lower flanges made of plywood having mutually perpendicular adjacent plies as taught by Landsem, and for the flanges have a width to thickness ratio of between 1:16.33 to 1:10.90 as taught by Edwards et al. because the techniques of having a corrugated cardboard core, plywood upper and lower flanges with a thickness to width ration of between 1:16.33 to 1:10.90 have been used to improve similar devices, and a person of ordinary skill in the art would recognize that it

would improve similar devices in the same way. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use plywood flanges, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 3, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. discloses a wooden composite I-beam (80) comprising each plywood flange (86,88) that extends beyond the supporting web (b) on each side thereof by about 1/3 of its total width (Col 4, Ln 50-54).

Regarding claim 5, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. discloses a wooden composite I-beam (80) comprising side walls (82,84) that are formed from a lesser thickness (t sub i) material than the material of the flanges (w sub f).

Regarding claim 6, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. does not disclose a core that comprises a plurality of layers of corrugated paper or cardboard which is each coated in a suitable adhesive and laminated together. However, Grigsby et al. in Figure 1 also teaches a central cavity comprising a core (a) that comprises a plurality of layers of corrugated paper or cardboard (12) which are each coated in a suitable adhesive and laminated together (Col 6, Ln 16-19). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the wooden composite beam of Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. to include a core that

comprises a plurality of layers of corrugated paper or cardboard which are each coated in a suitable adhesive and laminated together to provide further stiffness for the member using light-weight material as taught by Grigsby (Col 6, Ln 37-50).

Regarding claim 7, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. does not disclose the corrugations in the different layers of the core all run in the same direction. However, Grigsby et al. in Figure 1 also teaches a central cavity comprising corrugations (12) in the different layers of the core all running in the same direction. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the wooden composite beam of Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. to include a core that comprises a plurality of layers of corrugated paper or cardboard which the corrugations in the different layers of the core all run in the same direction to provide further stiffness for the member using light-weight material as taught by Grigsby (Col 6, Ln 37-50).

Regarding claim 11, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. discloses a wooden composite I-beam (80) wherein the cavity (a) within the web has a transverse width (w sub c) of between 20-35%.

Regarding claim 16, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. discloses a wooden composite I-beam (80) wherein the plywood flanges comprise veneers of wood (Col 6, Ln 3-6) with each flange having the wood grain in the outer veneer of the plywood flanges (86,88) extending longitudinally of the beam (d sub f), (Col 1, Ln 61-64).

Regarding claim 17, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al. discloses a wooden composite I-beam (80) wherein the cavity (a) within the web has a transverse width (w sub c) of between 25-35%.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lambuth ('459) in view of Grigsby et al. ('641), Landsem ('048), and Edwards et al. ('833) as applied to claim 15 above, and further in view of Pullam (U.S. Patent No. 5,930,968).

Regarding claim 12, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al., discloses the limitations as discussed above but does not disclose a plurality of dowels mounted on the web and spaced longitudinally along its length. However, Pullam in Figures 1,2, and 5 teaches an I-beam (14) further including a plurality of dowels (42) mounted on the web (30) and spaced longitudinally along its length. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the I beam of Lambuth already modified by Grigsby et al., Landsem, and Edwards et al., to include a plurality of dowels mounted on the web and spaced longitudinally along its length to increase the structural integrity of the beam when used in a framing system by securing it to adjacent elements (Col 5, Ln 26-50) as taught by Pullam.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lambuth ('459) in view of Grigsby et al. ('641), Landsem ('048), and Edwards et al. ('833) as applied to claim 15 above, and further in view of Wright (U.S. Patent No. 4,896,469).

Regarding claim 13, Lambuth already modified by Grigsby et al., Landsem, and Edwards et al., discloses the limitations as discussed above but does not disclose a building panel having a rectangular frame with both faces covered in board material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite I-beams as claimed in claim 2 extending there between. However, Wright in Figures 2 and 4 teaches a building panel (10) having a rectangular frame with both faces (14,16) covered in board material, the frame comprising top and bottom rails (40,a) which are joined together by a plurality of spaced apart wood composite I-beams (50). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the I-beam of Lambuth already modified by Grigsby et al., Landsem, and Edwards et al., by using it in a building panel having a rectangular frame with both faces covered in board material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite as taught by Wright to construct a light-weight building panel.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lambuth ('459) in view of Grigsby et al. ('641), Landsem ('048), Edwards et al. ('833), and Pullam ('968) as applied to claim 12 above, and further in view of Wright ('469).

Regarding claim 14, Lambuth already modified by Grigsby et al., Landsem, Edwards et al. and Pullam, discloses the limitations as discussed above but does not disclose a building panel having a rectangular frame with both faces covered in board

material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite beams extending there between, the beams inherently comprising outer beams with inner beams spaced therebetween depending on the length of the wall to be made, the outer beams being beams in accordance with claim 12. However, Wright in Figures 2 and 4 teaches a building panel (10) having a rectangular frame with both faces (14,16) covered in board material, the frame comprising top and bottom rails (40,a) which are joined together by a plurality of spaced apart wood composite I-beams (50), the beams comprising outer beams with inner beams spaced therebetween. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the I beam of Lambuth already modified by Grigsby et al., Landsem, Edwards et al. and Pullam to be included as the outer beams in a building panel having a rectangular frame with both faces covered in board material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite beams, the beams comprising outer beams with inner beams spaced therebetween as taught by Wright to construct a light-weight building panel where the outer beams can be attached to other adjacent panels when used in a multi-panel system.

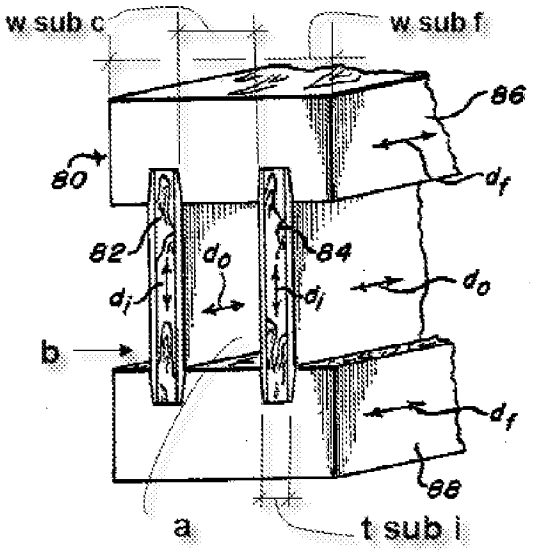

Fig. 4

Lambuth (U.S. Patent No. 4,413,459)

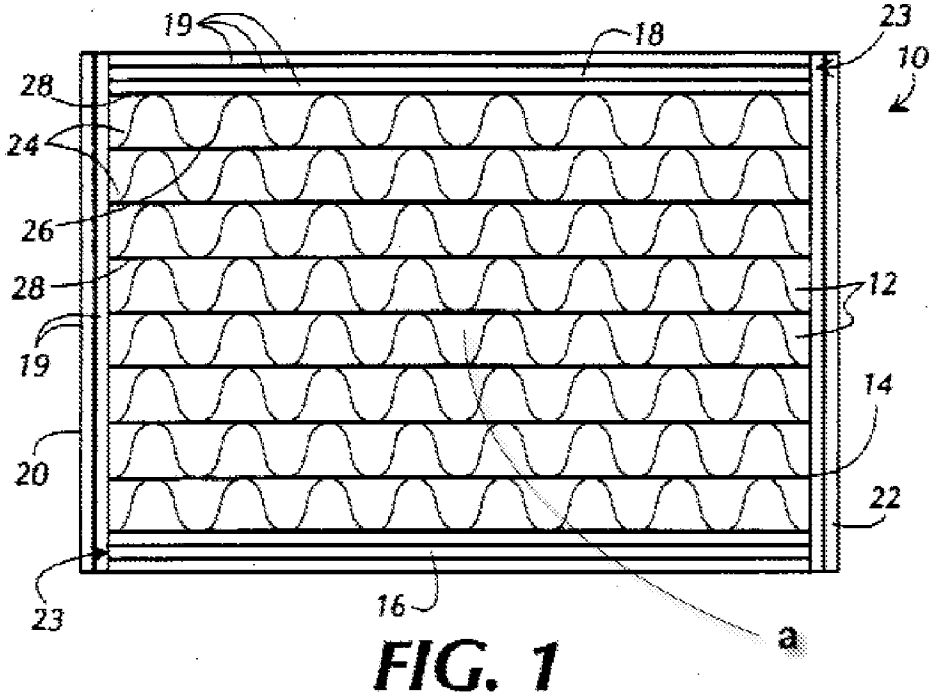

FIG. 1

Grigsby et al. (U.S. Patent No. 5,681,641)

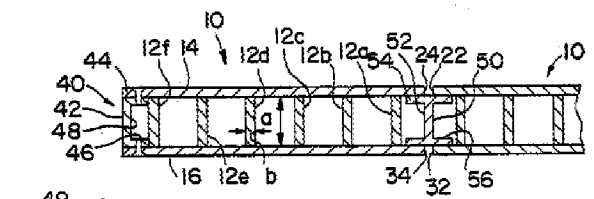

FIG. 2

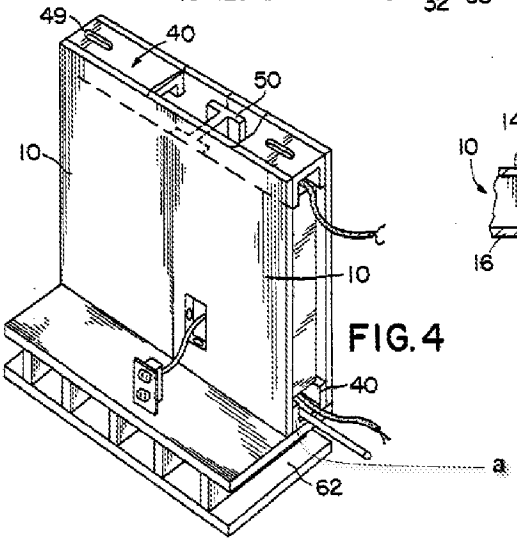

FIG. 4

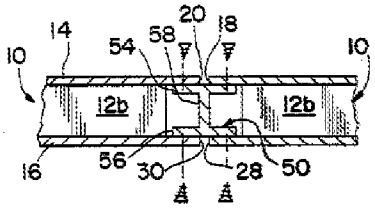

FIG. 3

Wright (U.S. Patent No. 4,896,469)

Response to Arguments

Applicant's arguments filed on 11/21/07have been fully considered but they are not persuasive.

On page 2 of the Applicant's reply, the Applicant argues Lambuth and Grigsby are non analogous art. The Examiner respectfully disagrees, and submits that one of ordinary skill in the arts would look to Grigsby et al. because Grigsby et al. is analogous art. With regard to analogous art, MPEP 2141.01(a) recites, "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." Grigsby et al. discloses a

composite support structure, see Grigsby et al. Col 6, Ln 11-16. Applicant's field of endeavor is composite support structures. Thus, Grigsby is in Applicant's field of endeavor. Furthermore, Applicant's invention is directed to providing a support structure that has a corrugated cardboard core for providing strength/rigidity, see Specification Page 8, Ln 11-13. Similarly, Grigsby et al. is directed to providing a support structure with a corrugated cardboard core to provide strength. Thus, the problem addressed by Grigsby et al. is pertinent to the problem being addressed by the Applicant's invention. Since Grigsby et al. is in the field of Applicant's endeavor and is pertinent to the problem solved by the Applicant, then, according to the MPEP, Grigsby et al. is analogous art, and the Examiner may rely on Grigsby et al. to reject Applicant's invention. See MPEP 2141.01 (a). The Examiner also directs the Applicant to page 1 of Grigsby et al., which shows that Grigsby et al. and the instant application are classified in the same class subclass (52/729.1). Furthermore, Grigsby et al. reference is indeed analogous to the Lambuth reference in that both Grigsby et al. and Lambuth deal with composite support members. For all of the above reasons, the Examiner maintains this rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hopfeld (US 3,487,518) reinforced structural member; Schneider (US 6,460,309) beam with filled hollow core.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE T. CAJILIG whose telephone number is (571)272-8143. The examiner can normally be reached on Monday - Thursday from 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Canfield can be reached on (571) 272-6840. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. T. C./
Examiner, Art Unit 3633
2/04/08

/Robert J Canfield/

Supervisory Patent Examiner, Art Unit 3635